Ken INOUE*: Notes on infraspecific taxa in *Platanthera stenoglossa* Hayata from Taiwan and Japan

井上 健: 台湾及び日本におけるタイトントンボソウの変異

In the course of the revision of the genus *Platanthera*, the author found that *P. stenoglossa* Hayata described from Taiwan in 1914 very resembles to *P. iriomotensis* Masamune described from the Ryukyus in 1934. In addition, he noticed the occurrence of the related plants in S. W. Japan. This short note is to elucidate the taxonomic position and distribution concerning the small group of *Platanthera* referred above.

Already in 1919, Schlechter independently described *P. stenosepala* from Taiwan, which Inoue and Lin (1980) considered to be conspecific with the Hayata's species. Later in 1969, Masamune treated his species to be conspecific with *P. stenosepala* Schltr. His view was followed by several authors such as Garray & Sweet (1974), Hatusima & Amano (1977), and others. In 1978, Hotta showed the variability of the leaf-shape of *P. ophrydioides* Fr. Schm. known in the whole area of Japan, and he noted the 'local diversity' of leaf-shape and habitat in the plants of S. W. Japan (Kyushu and Prov. Kishu), pointing that their leaves are broader than those of *P. ophrydioides* var. *australis* and that their habitat is the wet rocky places at the lower altitude. In the author's view, however, his plant of S. W. Japan should not be included in *P. ophrydioides* but definitely be identified with *P. stenoglossa* Hayata.

The author examined the above mentioned plants from three regions, i. e. Taiwan, the Ryukyus and S. W. Japan, based on the dried and fresh material, and found that they have many characters in common as follows: 1. Lowest leaf largest and nearly lying on the ground-surface: 2. Upper cauline leaves, if present, scaly: 3. Petals not forming a hood with the dorsal sepal, and widely spreading: 4. Petals much larger than the dorsal sepal: 5. Dorsal sepal smaller, usually 1-nerved, rarely 3-nerved.

These characters indicate that these plants may be better included in a

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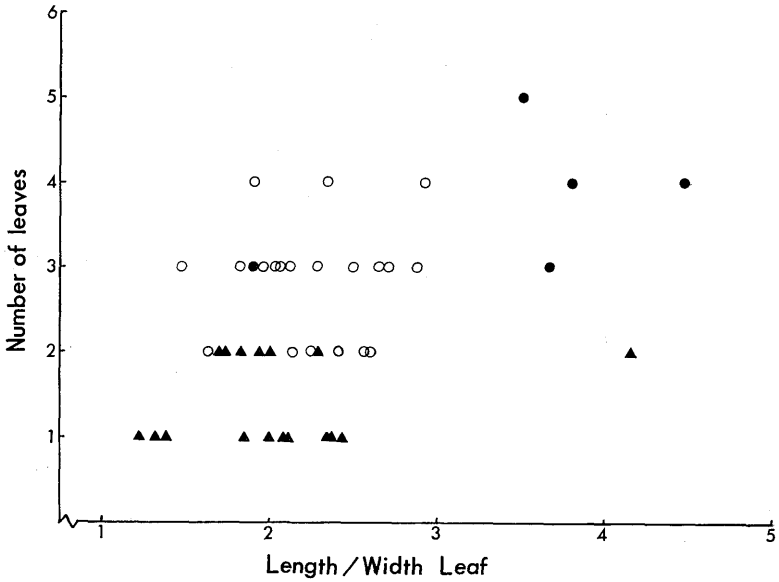

Fig. 1. Scatter diagram representing variation in respect to length/width ratio of leaf and number of scaly leaves from three subspecies of *Platanthera stenoglossa*. ●: subsp. *stenoglossa*; ○: subsp. *iriomotensis*; ▲: subsp. *hottae*.

single species, *P. stenoglossa* Hayata.

However, the plants of the three regions show some differences among each other. The scatter diagram of the shape and number of leaves in Fig. 1 shows that there are discontinuity among the plants of three regions, notwithstanding some slight overlapping; that is, the plants of S.W. Japan have fewer leaves, ovate in shape, the Ryukyu plants have more leaves, similarly ovate in shape, and the Taiwan plants have many, narrowly ovate leaves. Moreover, the flowers of the plants in the three regions show differences in size and shape in the floral organs such as the lip, spur and petals, and accordingly total size of the flower shows differences, as shown in Table 1 and Fig. 2. From the above mentioned facts, the plants of Taiwan, the Ryukyus and S.W. Japan are separable into three subspecies.

Key to the subspecies of *Platanthera stenoglossa*

1. Scaly leaves 1 or none; lowermost bract 12-16 mm long, usually longer than

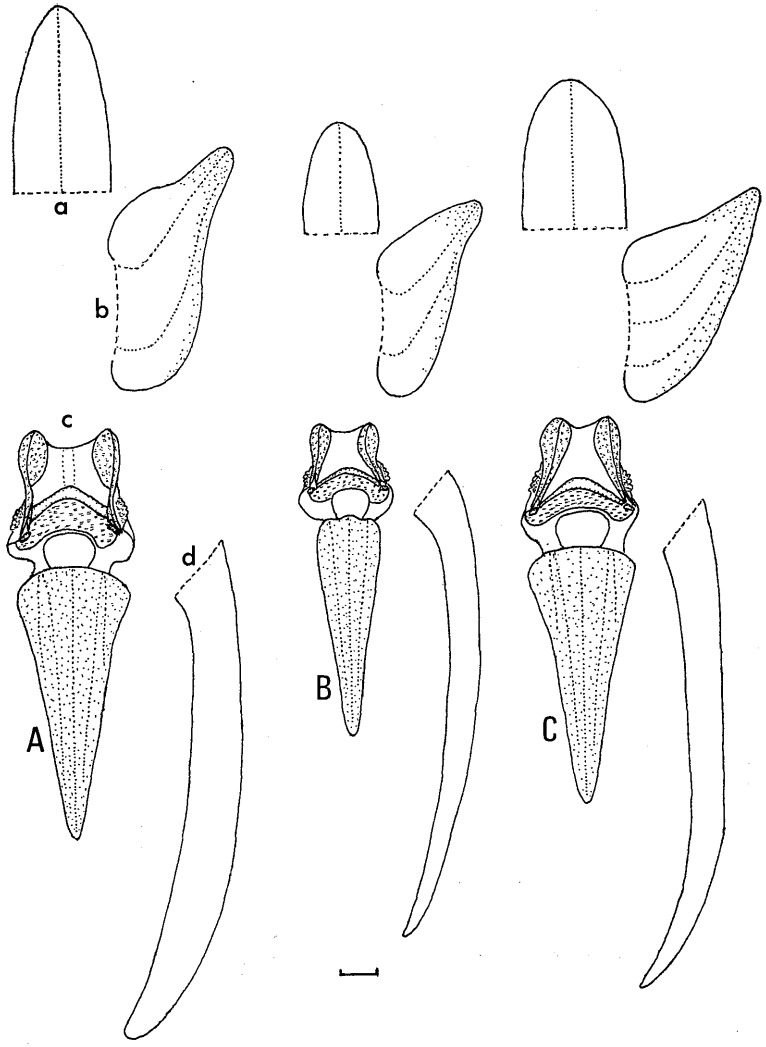

Fig. 2. Dissected flowers of *Platanthara stenoglossa*. A, subsp. *stenoglossa* (K. Inoue 1621); B, subsp. *iriomotensis* (K. Inoue 1498); C, subsp. *hottae* (K. Inoue 1623). a, dorsal sepal; b, petal; c, column with lip; d, spur. Scale 1 mm.

Table 1. Comparison of three subspecies of *Platanthera stenoglossa*

	subsp. *stenoglossa* (Taiwan)	subsp. *iriomotensis* (the Ryukyus)	subsp. *hottae* (S. W. Japan)
1. Leaf shape (Length/width ratio of lowest leaf)	narrowly ovate (3.4±1.0)	ovate (2.0±0.7)	ovate (2.1±0.4)
2. Number of scaly leaves	2-4	1-3	0-1
3. Length of lowermost bract	usual. shorter than ovary (8.9±2.2 mm)	usual. shorter than ovary (7.4±3.2 mm)	usual. longer than ovary (11.9±2.9 mm)
4. Flower size in across	ca. 6-7 mm	ca. 4 mm	ca. 6 mm
5. Mound at base of lip	−	+	±
6. Anterior margins of petal	sinuated	sinuated	not sinuated
7. Spur (width at middle)	stout (0.8-1.8 mm)	slender (0.6-0.8 mm)	slender (0.6-1.0 mm)
8. Column diameter	ca. 3.5 mm	ca. 2.5 mm	ca. 3 mm
9. Habitat	dry open cliff	semi-shady wet cliff	shady wet cliff

the ovary. .....subsp. *hottae*

1a. Scaly leaves 1-3; lower most bract 5-9 mm long, usually shorter than the ovary..... 2

2. Lowest leaf ovate; flower ca. 4 mm across, with a small mound at the base of the lip. .....subsp. *iriomotensis*

2a. Lowest leaf narrowly ovate; flower ca. 7 mm across, without a mound at the lip. .....subsp. *stenoglossa*

Platanthera stenoglossa Hayata, Ic. Pl. Formos. **4**: 133 (1914) et **6**: 93 (1916); Schltr. in Fed. Repert. Beih. **4**: 117 (1919); Ying, Col. Ill. Ind. Orch. Taiwan **1**: 493 (1977); Liu et Su in Fl. Taiwan **5**: 1094 (1978); Inoue et Lin in Journ. Phytog. Tax. **28**: 9 (1980).

subsp. **stenoglossa.**

Platanthera stenosepala Schltr. in Fed. Repert. Beih. **4**: 44 et 117 (1919); Ying, Col. Ill. Ind. Orch. Taiwan **1**: 293, fig. 131 (1977); Liu et Su in Fl. Taiwan **5**: 1094 (1978).

Specimens examined. Taiwan: Schichiseitonzan (Kawakami et Shimada s. n., July, 1910, Type in TI); Rankanzan (B. Hayata s. n., May 10, 1915, TI); Taipei-Hsien, Hsiaokotou (K. Inoue 1621, Mar. 27, 1977, TI and fresh materials; cult. in Tokyo, K. Inoue 1622, Mar., 1978, fresh materials).

Distr. Endemic to Taiwan.

subsp. **iriomotensis** (Masamune) K. Inoue, stat. et comb. nov.

Platanthera iriomotensis Masamune in Trans. Nat. Hist. Soc. Formos. **24**: 279 (1934) et Sci. Rep. Kanazawa Univ. **9**: 120 (1964); Hatusima in Fl. Ryukyus: 837 (1971).

Platanthera stenosepala (non Schltr.) Masamune in Sci. Rep. Kanazawa Univ. **9**: 121 (1964) et Col. Ill. Fl. Nippon **8**: 172 (1969); Hatusima in Fl. Ryukyus 837 (1971); Nackejima, Enum. Orch. Ryukyu. II. Pl. 141, 84 et 100 (1971); Garray et Sweet, Orch. S. Ryukyu Isls.: 31 (1974); Walker in Fl. Okinawa: 337 (1976); Hatusima et Amano in Fl. Ryukyus: 220 (1977).

Specimens examined. Ryukyus, Isl. Iriomote: Shirahama (Hatusima 34624 et 34624 A, Ryukyu Univ.; K. Inoue 1466, Apr. 29, 1980, TI and fresh materials); along Urauchi River (Tawada 91, Aug. 7, 1934, KYO); Kanpira (Y. Miyagi 3642, Aug. 1966, Ryukyu Univ.; K. Kakazu 09, Aug. 7, 1977, Ryukyu Univ.; T. Yamazaki s. n., June 13, 1971, TI; M. Togashi s. n., May 17, 1977, TI; K. Inoue 1499, May 1, 1980, TI and fresh materials); Maryudo (H. Kuroshima s. n., June 8, 1965, Ryukyu Univ.; K. Inoue 1498, May 1, 1980, TI and fresh materials); Inaba (F. Yamazaki, Sugiyama, Fukuda et Takushi s. n., Mar. 18, 1968, TI); without locality (G. Koidzumi s. n., July 1-20, 1923, KYO).

Nom. Jap. Iriomote-tomboso.

Distr. Endemic to the Ryukyu Isls. (Isl. Iriomote, Isl. Ishigaki).

subsp. **hottae** K. Inoue, subsp. nov. (Fig. 3)

Rhizoma breve; tuber fusiforme. Planta 15-25 cm alta. Folia infima maxima, prope terra, ovata, ca. 3-10 cm longa, ca. 2.0-4.5 cm lata; supra nulla vel una, in squamas lanceolatas abrupte abeutia. Inflorescentia remote 4-12-flora. Bracteae lanceolatae, 4-19 mm longae; inferiora quam pedicellis cum ovario longiore. Flores flavi vel chlorascentes, ca. 6 mm diametri; sepalum dorsale oblongum, obtusum, 3.5-4.5 mm longum, 1(-3)-nervosum; sepala lateralia reflexa, lineato-falcata, acuta, 5.5-7.5 mm longa, 1-2-nervosa; petala libera, oblique ovata, acuta, 5-6.5 mm longa, 2.5-3.5 mm lata, 2-3-nervosa; labellum anguste deltoideum, obtusum, basi dilatatum, 7-8 mm longum, 2-3 mm latum, deorsum

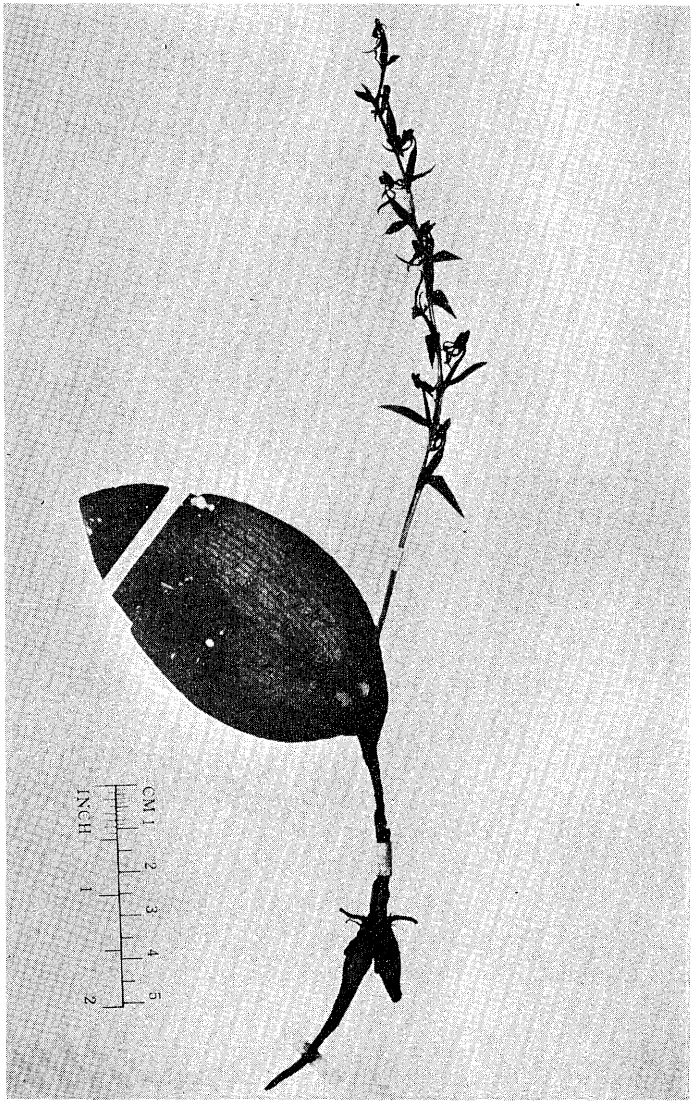

Fig. 3. *Platanthera stenoglossa* subsp. *hottae* (K. Nakashima s. n., Type in TI).

curvatum; calcar gracile, 10-15 mm longum, 0.6-1.0 mm latum, arcuatum. Columna ca. 3 mm diametro. Anthera loculi divergentes; connectivum latum; pollinarium ca. 3 mm longum; viscidium nudum, suborbiculatum, ca. 0.4 mm diametrum; caudicula gracilis, ca. 2 mm longa; staminodium conspicuum. Rostellum concavum; stigmata planae et confluentes.

Specimens examined. Kyushu: Miyazaki Pref.: Mt. Sobo-san (K. Nakasima 18885, July 24, 1939, Type in TI; H. Kamizuma, July 2, 1908; s.n.-KYO et 15-MAK); Mt. Ookue-yama (M. Hotta 10640, May 20, 1962, KYO; T. Yahara et M. Ito 4862, May 12, 1980, KYO; K. Inoue 1623, June l, 1979, fresh materials); Mt. Katamuki-yama (Z. Tashiro s.n., Aug. 18, 1938, KYO). Prov. Kishu: Wakayama Pref.: Mt. Nachi-san (collector and data unknown, KYO). Mie Pref.: Mt. Oodaigahara, Oosugidani (M. Tamura 105, Aug. 27, 1950, KYO; T. et F. Yamazaki, Sugiyama et Morita s.n., June 4, 1973, TI).

Nom. Jap. Sohayaki-tomboso (nov.).

Distr. Endemic to S.W. Japan.

This subspecies is found at present in Kyushu and Prov. Kishu. But it is expected to be also found in Shikoku; the habitat may probably be the wet rock along the stream.

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Garray, L.A. & H.R. Sweet. 1974. Orch. S. Ryukyu Isls. Hatsusima, S. & Y. Amano. 1977. Flora Ryukyus. Hayata, B. 1914. Ic. Pl. Formos. vol. 4. Hotta, M. 1978. Daiyonki **23**: 30-45 (in Japanese). Inoue, K. & T.P. Lin. 1980. Journ. Phytog. Tax. (Kanazawa) **28**: 1-13. Liu, T.S. & H.J. Su. 1978. Fl. Taiwan **5**: 859-1137. Masamune, G. 1934. Trans. Nat. Hist. Soc. Formos. **24**: 279-281. ——. 1969. Col. Illus. Fl. Nippon vol. 8 (in Japanese). Schlechter, R. 1919. Fed. Repert. Beih. **4**: 1-319. Walker, E.H. 1976. Flora Okinawa S. Ryukyu Isls. Ying, S.T. 1977. Col. Ill. Ind. Orch. Taiwan, vol. 1.

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ツレサギソウ属の研究をしている著者は，台湾の *Platanthera stenoglossa* が琉球・西表島と西南日本（九州と紀州）の植物に類縁がある事を見い出した。そこで上述の3地域の植物を標本と生品とで検討した。

その結果，3地域の植物は最下の葉が上部の葉に比して極めて大きく，殆んど地表に接している点，上部の葉は鱗片状になる点，花弁が背がく片よりかなり大きい点，だ円

形の背がく片は小さく通常1脈を持つ点などが共通であり，同一種と考えられる。しかし，3地域の植物は，表1で示した様に，葉形，鱗片状の茎葉の数，苞の長さ，花の大きさ，花被片の形などでそれぞれ特徴があり，3亜種として取り扱うのが適当である。西南日本の植物はかつて堀田満氏がキソチドリの葉形の変異を論じた時注目されたものであるが，この植物は上述の様にキソチドリではなく *P. stenoglossa* に類縁がある。この新亜種名は特異な植物があることに気づかれた堀田氏を記念し，また，和名を**ソハヤキトンボソウ**とする。

○高等植物分布資料 Materials for the distribution of vascular plants in Japan 103 **アリモリソウ** *Codonacanthus pauciflorus* (Nees) Nees 筆者は1978年11月30日，宮崎県日南市油津においてアリモリソウを採集したのでここに記録しておく（証拠標本：J. Murata no. 7016 in TI, KYO, TUS)。生育地は海岸沿いの国道に面したスギの植林下で，約 100 m^2 にわたり多数の個体が見られた。従来アリモリソウの分布はその北限が屋久島・種子島であるとされており，今度の記録は九州本土から始めて正式に報告されるものであると思われる。なお，国内の各ハーバリウムに所蔵されている標本を再調査したところ，鹿児島大学農学部にはすでに1911年に鹿児島県志布志で採集された標本（山岸 亮 s.n.）があることがわかった。これら2つの記録により，南九州の東側海岸付近には古くからアリモリソウが自生していたと考えることができる。

（東京大学理学部附属植物園 邑田 仁）

□林弥栄：**サクラ100選** グリーンブックス61, pp. 128, pls. 8, 1980. ニューサイエンス社，東京，¥850。著者は浅川実験林に国営の「サクラ展示林」の造成第一期に直接育成にタッチした人である。日本のサクラの種々を花を第一に，葉を第二に注目して分け，それを命名規約に従って分類し，列記したものである。ヤマザクラには *Prunus jamasakura* Sieb. が使ってあり，大部分の品種は cv. に扱われている。新しい分類が処々に出ており，ソメイヨシノがオオシマザクラの紅色系花一重咲きに出ていて *Prunus* ×*yedoensis* Mastsum. cv. *Yedoensis* となっているなど，近頃まとまった見方として問題になるだろう。（前川文夫）

□牧野富太郎：**植物知識** pp. 122, 1981. 講談社，東京．¥360. 本書は昭和24年に逓信省から「四季の花と果実」と題して発表されたものを改題したもの。花にボタン以下18篇，果実にリンゴ以下4篇を牧野調で種々論じたもの。読者を素人として一気呵成に書かれた。あとがきで植物は一つの宗教であると呵破している。終りに伊藤洋氏が注をつけ，また「牧野富太郎博士のことなど」として一般説とは違った坦々たる見方をしているのは意義が深い。（前川文夫）